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On Becoming a Global Citizen: Transformative Learning through Global Health Experiences

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Abstract

Background—Globalization has increased the demand for international experiences in medical education. International experiences improve medical knowledge, clinical skills, self-development, influence career objectives, and provide insights on ethical and societal issues. However, global health rotations can end up being no more than tourism if not structured to foster personal transformation and global citizenship.

Objective—We conducted a qualitative assessment of trainee-reported critical incidents to more deeply understand the impact of our global health experience on trainees.

Method—A cross-sectional survey was administered to trainees who had participated in a two-month elective in Kenya from January 1989 to May 2013. We report the results of a qualitative assessment of the critical incident reflections participants (n=137) entered in response to the prompt: “Write about one of their most memorable experiences and explain why you chose to describe this particular one.”

Approach—Qualitative analyses were conducted using thematic analysis and crystallization immersion analytic methods based on the principles of grounded theory, employing a constructivists’ research paradigm.

Results—Four major themes emerged. These themes included: *Opening Oneself to a Broader World View*; *Impact of Suffering and Death*; *and Life Changing Experiences*; and *Commitment to Care for the Medically Underserved*.

Conclusions—Circumstances that learners encounter in the resource-scarce environment in Kenya are *eye-opening* and *life-changing*. When exposed to these frame-shifting circumstances, students elaborate upon or transform existing points of view. These emotionally disruptive experiences in an international health setting allowed students to enter a transformational learning process with a global mind. Students can see the world as an interdependent society and develop the capacity to advance both their enlightened self-interest and the interest of people elsewhere in the world as they mature as global citizens. Medical schools are encouraged to foster these experiences by finding ways to integrate them into curriculum.

Keywords

Global health; medical education; training; global health experience

Introduction

Globalization has increased both the need and the demand for international experiences in undergraduate and graduate medical education. Short-term international experiences can improve medical knowledge and clinical skills,¹ influence career objectives,² provide insights on ethical and societal issues,³ and self-development.^{4,5} However, little is known about the process and theoretical underpinning of learning through these experiences. Global health rotations can end up being no more than tourism if not structured to foster personal transformation and global citizenship.⁶ Social transformation theoretical models suggest that

experiences that promote global citizenship should be guided by principles of mutuality and reciprocity through established partnerships.⁷ Pertinent transformative learning theory asserts the critical importance of processes of self-reflective practices essential for self-development leading to sustained changes in perspectives.^{8–10} Sustained changes in perspective are often triggered following intense experiences that have evoked strong personal emotions.¹¹

By way of brief framing, transformative learning theory suggests adults have acquired a coherent body of experience—associations, concepts, values, feelings, conditioned responses—that are the frames of reference that define their world. These consist of a *point of view* or perspective and *habits of mind* which are broad, abstract, explicit ways of thinking, feeling, and acting, influenced by assumptions that may be cultural, social, educational, economic, political, or psychological. The point of view may be an implicit one that is subject to change after reflection on experience. When circumstances allow, transformative learners move toward a frame of reference that is more inclusive, discriminating, self-reflective, and integrative of experience.¹² To accomplish this change, learners may establish new points of view, or elaborate upon and transform existing perspectives and habits of mind.

Transformative learning may often be an intensely disruptive or even threatening experience in which we have to become aware of both the assumptions undergirding our ideas and our emotional response to the need for change.¹³ Uncomfortable emotions or *edge emotions* arise when we feel pushed to the edge of our comfort zone when we are not able to maintain coherence and continuity in our frame of reference with habitual interpretive frameworks. One needs to acknowledge and accept *edge emotions* as a prerequisite to becoming aware of and assessing the problematic assumptions in reflection. Awareness of these *edge emotions* allows the learner to become aware of such emotions, assess and explore what is giving rise to them, and set the stage for transformative learning to occur.

In 1989, Indiana University School of Medicine (IUSOM) formed an academic partnership with Moi University School of Medicine (MUSM) founded on principles of mutuality and reciprocity.¹⁴ The goals of the partnership are: to deliver health care services, conduct health research, and develop leaders in health care for both the United States and Kenya. Through the framework provided by this longstanding institutional partnership, a bilateral exchange of learners was made possible. Participants have described their experiences through the exchange as *life-changing*, *challenging*, *incredible*, and *enlightening*.^{5,15–17}

This unique partnership supports long-term North American faculty in Kenya who host and support participants during their 2-month global health rotations. These rotations have a strong education focus and the faculty (Team Liaisons) provide a formal structure that introduces participants to global medicine through bedside teaching with MUSM learners, case presentations and discussions, grand rounds, tropical medicine lectures, and journal club meetings. The bilateral nature of the program in supporting reciprocal opportunities for MTRH faculty and learners has been previously described.¹⁷

The multi-disciplinary, multi-national nature of the program fosters informal opportunities for learning as well (e.g. mealtime discussions where a pre-professional student share a meal with an Entomologist, a Journalism professor, and/or an HIV/AIDS Dermatology expert or share a car ride to a local clinic with a seasoned clinician). In this environment, participants share experiences, surprises, challenges, discomforts and gain from one another's experiences. Learners also join in weekly faculty-led "fireside chats" which provide an opportunity for group reflection and shared processing and dialogue. In addition to opportunities to meet with on-site faculty leaders during the rotation, learners also receive a one-on-one debriefing with experienced global health faculty on their return to the U.S.

To more deeply understand the impact of our global health experience, created with action and reflection cycles thought to be essential to transformative educational practice, we conducted a qualitative assessment of trainee-reported critical incidents.

Methods

From October to December 2013, a cross-sectional survey was administered to IUSOM alumni who had participated in a two month elective at Moi Teaching and Referral Hospital (MTRH), Eldoret, Kenya from January 1989 to May 2013. We contacted all former students and residents (an estimated 560 trainees) who had participated in the elective during their training from January 1989 to May 2013 inviting them to participate in a 38-item online REDCap¹⁸ survey that included demographic questions (age, gender, race, and ethnicity), specialty/subspecialty, dates of rotation(s) in Kenya and stage in training at that time along with questions on career choices and practices. One-hundred seventy-six trainees completed the survey. Details about the survey method and quantitative results, including impact on future career choice and practice locations, have been previously described.⁵ Two open-ended survey questions focused on the influence of the Kenya elective rotation on their career choices and practice patterns. Of the 176 who completed the survey, 137 trainees wrote reflective narratives to these open-ended questions. Many years out of training, participants were more likely to be generalists working with underserved populations, to be cost-conscious in their healthcare decision-making, and to be involved in global health, public health or public policy.⁵ In this manuscript, we focus on a qualitative assessment of the written critical incident reflections participants entered in response to the final survey prompt: "Write about one of their most memorable experiences and explain why you chose to describe this particular one."

Qualitative Analytic Methods—Qualitative analyses were conducted by two study investigators (DL, AC) using thematic analysis and crystallization immersion analytic methods based on the principles of grounded theory.^{19–21} These investigators, employing a constructivists' research paradigm, independently reviewed all narrative entries to identify initial themes then worked together to build consensus on all major themes. They then independently coded all transcripts through an iterative process using thematic content analysis.²² As new codes were identified, the coding scheme was refined using the constant comparative method.²³ Investigators met regularly to compare and discuss, resolve disagreements, and come to consensus on discordantly coded data. Saturation was achieved after no new themes emerged from the data. Codes within and across transcripts were

compared and synthesized into overarching themes. Investigators developed clear inclusion/exclusion criteria and a random sample of transcripts were double coded to ensure agreement between coders. These themes and illustrative quotes were reviewed and discussed by all authors, who broadly represented the Kenya and North American institutions actively involved in the bilateral educational program, to assess the fit, relevance, workability, and modifiability^{24,25} of how well the concepts fit with the incidents before finalizing the themes.

Results

The analysis included responses from 137 former IU medical students and residents who had participated in the MTRH rotation and responded to the final prompt to provide a written, narrative reflection (Table 1).

Qualitative Analysis

Four major themes emerged from qualitative analysis of narrative data from the Kenya elective surveys: *Opening Oneself to a Broader World View; Impact of Suffering and Death; and Life Changing Experiences; and Commitment to Care for the Medically Underserved*. We describe each theme below along with sample supporting quotes. Additional quotes organized by theme are included in Table 2.

Opening Oneself to a Broader World View: Practicing in a Resource-Poor Health Care Environment

—Immersion in a system of care that lacked many of the resources trainees were accustomed to having available in U.S. health facilities was life-altering for many. Trainees observed that this experience taught them to be frugal with resources. It also had a powerful impact on their understanding of global inequality and how this inequality impacts the lives of patients. Many learned the challenging lesson of having to ration scarce resources. For example, one participant wrote:

I had to choose between patients who I felt would be more likely to survive – i.e. triage the basic resource of oxygen for pneumonia... In making that choice, I saw the immediate effects, one young patient died while the other survived. I will not forget the tremendous challenges faced by providers in resource-poor environments.

Frequently caring for patients for whom little could be done in terms of medical interventions, trainees expressed a heightened appreciation of the importance of presence and compassion in caring for patients as illustrated by the following comments:

[A] boy [was] diagnosed with tuberculosis and his family abandoned him at the hospital. He was 12 years old. I would bring him a lollipop every day. I knew the day he would die when he did not take the candy. I learned sometimes the only thing I could do was be kind.

They gained self-awareness by seeing their own culture through the eyes of their Kenyan counterparts. When doctors and nurses went on strike in Kenya, participants were challenged to think about some of the major differences between Kenya and the States in

how medicine is practiced, how medicine is perceived, how Kenyan politics worked, what resources were available, and how they are utilized. One trainee wrote:

I was forced to think about the moral implication of the strike, professionalism and duty for the physicians practicing in Kenya, potential tension between the Kenyan and American doctors, and individual struggles of those (both Kenyan and American medical professionals) who were trying to take care of the patients in the midst of all the moral, psychological, emotional, and physical chaos. I was fortunate enough to see the end of strike while in Kenya, and it was incredibly humbling to watch the hospital rolling back to its previous place, starting from where it left off as the doctors and nurses resumed back to work. It served as a reminder to me about the importance of Kenyans taking care of Kenyans and the importance of empowering those involved (in a multi-faceted sense of the word, not limited to culture, medicine, resources, knowledge, and partnership) to be able to do so.

Impact of Suffering and Death—Patients cared for by the Kenya trainees many times suffered from advanced stages of devastating illnesses, often not seen in the U.S, and great pain, due to the lack of available medical interventions and medications. Trainees often commented on feeling *helpless* in the face of needs that they could not address.

The strong emotions expressed by the loved ones of patients who had died impacted many participants. They describe how they were haunted by the suffering and death of patients. One learner provided an example:

His Mom who had been at his bedside saw his eyes and immediately dropped to the ground in sorrow, knowing how grave this was. He would pass away later that day, and I will always remember the agonizing screams from his Mom as she was carried out of the wards by friends. Her sounds were filled with the rawest human emotion I think I have ever heard.... It is the sound of your heart breaking and feeling as if it can never be repaired.

In other instances, learners were surprised at the apparent calm of family members and providers in the face of death. While they noted the frustration of not having available lifesaving medical resources and the suffering and death faced by patients and families, learners also remarked on finding beauty – in the environment, the patients and families, and the providers – in the midst of the suffering and death.

Trainees learned resilience, *particularly in the face of death and disability*, from Kenyan physicians and Kenyan patients. In assuming new levels of responsibility for caring for suffering patients, trainees spoke of being *challenged* both *professionally and emotionally* describing their experience as the *most trying, exciting, and humbling* time in their health care career. Trainees also reported learning from their patients about faith, strength, and putting trust in others. One participant provided an example:

The 9 y/o girl dying of cancer with a large tumor on her back, who continued to fetch water and bread for herself and her father--both of whom had a calm that will stay with me forever.

They repeatedly highlighted the quiet, gentle, accommodating spirit of the Kenyans, with kind and generous words and actions, even in the face of suffering and death. One trainee writes:

I was on an Ob/Gyn rotation and I was with one mother throughout the day while she was laboring. When she delivered, she had an obstructed labor and the newborn died. I remember not knowing how to get help immediately for the baby and rushing the baby to the NICU. The following day I visited the mother and we walked hand in hand down the hallway. **She thanked me.**

Learners also gained an early appreciation for the importance of personal connections in understanding and embracing cultural differences as foundational for effective, sustainable partnerships.

Life Changing Experiences—Learners repeatedly describe their experience in Kenya as *life-changing* and as *the most important and influential experience* in their medical training. The experience rekindled altruistic motivations that led them to a career in medicine in the first place, opened their eyes to career possibilities where they could *do good* in the world, and *changed their worldview* about what they might accomplish. Even during uncertain times (e.g. during doctors' strikes and post-election tribal tensions), trainees were unwavering about their international experience being one of the greatest decisions they had ever made, and frequently expressed plans to return. Many individuals went to Kenya *to help* and *to make a difference for those in need* only to find they personally received far more than they were *able to give* and that their future patients benefited from the lasting transformative learning stimulated by their life changing experiences. Years after the IU-Moi experience, one provider wrote:

As an intensivist, I am used to facing death and even futile care, but of all of our resources here in the states including pain medicine, support systems and palliative and hospice care, we can at least offer comfort to our patients, even if it is not a cure. I took away so much more from Kenya than I was able to give back, and now that I am older, I realize that is probably the point. I went there, not being so naive that I thought I would change something profoundly, but hoping that I would at least help someone. Over time there though, my feelings of loss were replaced by a more peaceful acceptance, though not a complacency...through me, they (the people of Eldoret) have affected many of my patient's here as those experiences have shaped me and my practice.

No matter where health providers practice in the world, there will inevitably be situations where a cure is not possible, even in the most resource-rich environments. It is these situations that providers come to observe, understand, and participate in – what it means to provide hands-on caring even when curative therapy is not available. The frequency and emotional intensity of their involvement in these meaningful human connections resonate in the reflective narratives.

The Kenya experience allowed health care trainees to learn early in their careers how caring for patients leads to bi-directional connections that often leave the provider feeling “cared for” by his/her patients. In Western high technology-focused health care environments

focused on cure, some providers experience the reciprocal nature of the doctor-patient relationship only after years of patient care practice. One trainee reflects on his transformational experience:

I met a patient, a young man, during my time in Eldoret who had a diagnosis with a straight-forward treatment in the West. We spoke on rounds every day and at the end of most days. He was always more interested in making sure I was enjoying Kenya in general and Eldoret in particular. He grew more and more ill over about 2 weeks before dying. I think about him often, more than 10 years later, when I feel like I've had a 'tough shift'. My experience with him (as well as several other patients like him) is not only professionally, but personally, very grounding.

Commitment to Care for the Medically Underserved: Trainees in the Kenya Elective often found that the experience influenced or reinforced their personal commitment to provide care for the medically underserved. For some, this was focused specifically on international global health. For others, the commitment was directed toward service to underserved populations in the U.S. As one trainee noted:

It confirmed that global health was important to me, and led to me choosing a residency program that would allow me to continue global health work.

Numerous stories reflect the impact of faculty modeling commitment to the underserved. In particular, one of the senior North American faculty members and co-founders of the AMPATH program, who lives and practices full-time in Eldoret, had a lasting influence on many learners. These stories often took place during a routine car ride out to a rural clinic, over a meal at the IU house, or during a teaching session added to the end-of-a-long-day of caring for patients. Trainees heard and seemed to integrate powerful life lessons as reflected in this story:

In truth, a simple car ride with (Prof) to an outreach clinic was probably the most memorable experience. Our conversation touched on the struggles with poverty and illness in Kenya, and the importance of just getting people to care about those half a world away.

Discussion

This thematic analysis of health professional trainees' experiences in the IU-Moi University partnership has clearly brought to light seminal events that theorists would describe as ones that richly illustrate many aspects of transformative learning^{8,11,12}. Our IU learners plunge into their global health experience with perspectives from their life-experiences in North America. For many trainees, their Kenya experience reinforced and heightened their self-awareness of personal and professional values, their ultimate career trajectory, and a broader more embracing world-view. They felt inspired to *strive for excellence* in all their endeavors.

The circumstances that learners encounter in the resource-scarce and different cultural environment in Kenya are *eye-opening* and *life-changing*. When exposed to these frame-shifting circumstances, they may elaborate upon or transform existing points of view, question their own *habits of mind* and move toward a frame of reference that is more

inclusive, discriminating, self-reflective, and integrative of experience.¹² This cross-cultural challenge and frame-shifting does not mean that our students abandon their own prior experience and wholly embrace the perspectives and practices of a new environment. Mezirow noted that the goal of transformative learning theory is “to establish learners as having the ability to act on their own purposes, values, and beliefs rather than critically acting on those of others”.⁶ Pushed to the edge of their comfort zones, they experience *edge emotions*,⁶ and are moved to reflect on the impact their life-changing experiences promoting a new heightened level of self-awareness.

Some of the students’ reflections on their experience are clearly emotionally charged. Disruptive emotion is *indispensable for mental functioning as well as for action*¹¹. When supported as our students were, with on-site faculty, group reflection and post-experience debriefing opportunities, it is possible for these experiences to be transformative. When the student’s emotional experience is based in an international health setting, students can enter this transformational learning process with a *global mind*. They can see the world as an interdependent society and can develop the capacity *to act to advance both their enlightened self-interest and the interest of people elsewhere in the world by understanding the interconnection of all living things*⁶ as they mature as global citizens.

Medical schools need to foster these experiences by finding ways to integrate them into an already busy curriculum. Meeting this challenge may be worthwhile. Hanson notes that attention to this *global mind* among future health professionals fosters the development of not only culturally sensitive practitioners but also personal commitments to social change for health justice and equity⁶. Few experiences can demonstrate these effects.

Indiana University has been fortunate to have an academic partnership with Moi University School of Medicine for over 25 years that has provided a platform for bidirectional student and faculty exchange. Students from several professional disciplines, including medical students as well as communication and journalism students, have traveled to Kenya and have had an opportunity to engage in these remarkable experiences. While in Kenya, gatherings such as those at communal meals where informally convened conversations allow trainees and visiting and supervising faculty alike to share experiences, surprises, challenges, discomforts, heightened awareness, increased openness and interpretations of their experiences promote transformation of a new global social order. Critically important in the transformational learning experience, full-time faculty who work in the Kenyan health system organize formal and regular opportunities for dialogue and reflection.

While this qualitative study analyzed data from a large number of respondents, its results are limited by the respondents being from a single institution and having experienced one international setting. Although the data are compelling about the potential impact of these experiences, due to cost and logistics including a desire not to overburden the Kenyan system with North American trainees, the program has a limited capacity and is not be able to accommodate all interested students.

In conclusion, the IU-Moi University partnership for medical students and health professional trainees provides a highly impactful, transformative learning experience that

fosters the development of *global mindedness* and community involvements, whether local or global, long after the experience.⁵

Medical training programs designing global health experiences for their trainees are encouraged to establish international partnerships, built on mutuality and reciprocity,^{17,26–28} and regularly engage trainees and committed faculty supervisors in shared international experiences with ample opportunities for reflection together.

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Table 1

Demographics of Survey Respondents

	Respondents (n=137) N%
Current age (years)	
< 35	68(49.6)
35–44	50(36.5)
> 44	19(13.9)
Gender	
Female	73(53.3)
Race [*]	
Caucasian	112(81.8)
Other	22(16.1)
Type of rotation [†]	
Medical student elective	90 (60.0)
Resident elective	60 (40.0)
Time elapsed (years) [*]	
< 5	51 (42.1)
5–10	39 (32.2)
11–15	18 (14.9)
>15	13 (10.7)

^{*} Omitting unknown

[†] N=150 since some individuals had both student and resident electives

Table 2

Themes and Illustrative Quotes from Medical Trainee's International Elective experiences

Theme	Illustrative Quotes
Commitment to Care for the Medically Underserved	<ul style="list-style-type: none"> I spent a week in a rural mountain village with a gynecologist watching vesicovaginal fistula repair on women who had complications of child birth and had experienced female genital mutilation. I appreciated for the first time I think my privilege as an American woman, and realized that it was my calling to help the underserved in need of surgical medical care. It has impacted me in my choice to do residency in Chicago with part of my time spent in the underserved Cook County Hospital.
It Opened My Eyes: Practicing in a Resource-Poor Health Care Environment	<ul style="list-style-type: none"> It helped me learn the importance of practicing medicine efficiently (e.g. only ordering labs or tests which are both available and would provide meaningful results). Watching a 2-year old die from unclear causes, suspected acute hepatic failure. Our blood tests were infrequent and unreliable. We had no money for imaging and no ventilator or specialty help to support him. Heartbreaking reality of the disparity of care and resources. Seeing and caring for a patient who had bacterial meningitis, who deteriorated very quickly and eventually died - as a fourth-year medical student, I saw this condition and this particular outcome as exceedingly rare, and to see it happen as it did in Kenya, with no antibiotics available, was incredibly difficult and eye-opening. I once initiated cardiopulmonary resuscitation on a woman who likely had an acute human immunodeficiency virus (HIV) infection and multi-system organ failure..... My Kenyan colleagues were confused as to why I would do this. I soon realized that they did not have the resources to sustain her if I were to resuscitate her and I was probably doing her more harm. I understood how my best efforts and what I believe to be best in my heart of hearts may not actually be what someone needs. I learned that sometimes just being there and acknowledging her life and uniqueness as an incredible living human being and providing witness for her was the most important thing I could provide and the most important skill I can have is to demonstrate my love for others.
Suffering and Death	<ul style="list-style-type: none"> Nothing really prepared me for my first tour of the wards- seeing such overt suffering paired with frequent helplessness was distressing. Watching a boy [who was] 13 years old shortly before he died of rheumatic heart disease and likely endocarditis. We could barely scrape together two low-dose morphine pills to give him and he was in so much pain. I have never felt so helpless. I remember very early on taking care of a young 16-year old girl who most likely had advanced stage lymphoma. I watched as she had a lumbar puncture performed. She was alone and cried for her mother.....A complete blood count (CBC) was drawn and no further therapy was going to be provided until a diagnosis was made. I repeatedly went to the lab hoping to get the results, to see that maybe she could be started on something, anything, to stay away whatever illness was consuming her. I went home that evening with her in a bed huddled with a stranger whom she did not know with no results, no therapy. I went in early to find her the next day hoping her test results had returned overnight. I found her body moved, wrapped in a sheet and placed with the others who had died over the evening. Her CBC results came back from the lab days later. I can appreciate now that regardless of the results she would have passed. ... It's that she passed alone... and in pain that made me feel so lost. <i>There was a situation where if the baby had been in the U.S., he could have had life-saving surgery. It was not possible in Kenya and he died of heart failure. What was memorable was the acceptance of the family of this situation recognizing the blessing this baby had on this family during his short life - no blame, no [outward] agony.</i> I remember an unfortunate patient who had disseminated abdominal tuberculosis. I recall that memory particularly because it brings back such stark emotions--the sadness of a difficult diagnosis and problem we couldn't fix surgically and the beauty of sunlight coming into our operating room.
Meaningful Connections	<ul style="list-style-type: none"> <i>A patient came in with ascending leg paresis. It got as high as his torso before stopping. We couldn't do anything for him. We were afraid of (possible complications such as) DVT, pneumonia, etc. His friend came every day to do physical therapy exercises with him. I kept encouraging his friend to continue. At the end of his stay, I told his friend that he was the one who did the most for the patient. I still have the photo of the two together.</i> I mostly remember the friendships and relationships that I was able to build with the Kenyan medical students and doctors. By getting to know them on a personal level I was much better able to understand some of the cultural things that had a huge impact on the health of the community.

Theme	Illustrative Quotes
	I have carried this into my other international partnerships where it is just as important to nurture the relationship with a partner as to develop the program so that you can better understand those things that as an outsider seem so different.
Generosity of Spirit	<ul style="list-style-type: none"> <i>I listened to him (Prof) talk about giving people not just one chance when they let you down but multiple chances because after all we are human and as such we err... a lot.</i>
Life Changing	<ul style="list-style-type: none"> It really changes ones worldview. Helped remind me of the reasons I went to medical school in the first place. I was burned out after my first year of medical school and my Kenya elective as a Slemenda scholar after my first year was a refreshing experience in medical school, re-energizing me to double down on my studies to become a good doctor. It inspired me to be a great doctor and work hard more than any other experience in medical school.
Who I Am in this World	<ul style="list-style-type: none"> The Kenya rotation shaped my thoughts of what it means to be a doctor and how I see my career going. At one point all the first year IU and Moi students went to a rural health center. One day we went from the health center to a mud hut in a village to do some outreach and well-baby care. We were weighing babies, giving mother's advice on care of their babies, as well as good nutrition for themselves. I was amazed at the good we could do, as 1st year students, without electricity or almost any modern technology. At the same time it was extremely humbling to feel helpless to cure diseases that would be treated in the US. Not every patient with rheumatoid arthritis can afford injectable biologic medications or can even afford monthly transportation to our infusion clinic. You must learn to work with each patient individually and find a solution that is feasible and works for them. The 13 y/o brother who cared for his 9 y/o sister with end stage cardiac failure because their parents had died of AIDS. The teenager we rushed to surgery with peritonitis, and how I learned from him how to calculate dosages, draw up medicine, calculate a drip rate and hang the drug. <i>It was during my rotation that the Kenyan students who went to the US described their experiences in the US at a "nyama choma" (large feast with many meat dishes). They were quite entertaining and humorous in their presentations, but they described so many parts of our medical care as well as our culture that we take for granted. They described obesity, eating on the go, tests for everything (as opposed to physical exam skills), streetlights, organization as opposed to chaos. I mention it because we get so caught up in the way that we do things sometimes that we don't realize how silly we are in the things that we value, or we don't realize the simple things that we should appreciate.</i>